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(54) **AIRFOIL COMPONENTS CONTAINING CERAMIC-BASED MATERIALS AND PROCESSES THEREFOR**

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(58) **Field of Classification Search**

CPC F01D 5/18; F01D 5/20; F01D 5/284
See application file for complete search history.

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(57) **ABSTRACT**

A process for producing airfoil components containing ceramic-based materials and having a tip cap. The process entails forming an airfoil portion of the component from an airfoil portion material that contains a precursor of a ceramic-based material. The airfoil portion material defines concave and convex walls of the airfoil portion, and the concave and convex walls define a tip region of the airfoil portion and at least one cavity within the airfoil portion. At least a first ply is formed that contains a precursor of a ceramic-based material, and the first ply at least partially closes the cavity at the tip region of the airfoil portion. The airfoil portion material and the first ply are then cured so that the first ply forms a tip cap that closes the cavity and the precursors of the airfoil portion material and first ply are converted to the ceramic-based materials thereof.

20 Claims, 5 Drawing Sheets